CLAIMS

1. An installation for transmission of electric power via a high-voltage ac voltage line (3) between two switchgear units (1, 2) located at a large distance from each other, **characterized** in that, for the transmission of the electric power, the ac voltage line comprises at least one extruded cable (4) with an inner electric conductor (5), an insulating layer (6) of a solid material surrounding said conductor, and an outer screen layer (7) located at ground potential, and that, in addition, the installation comprises one or more inductors (13) located along the extent of the cable between the switchgear units and integrated into the cable, said inductors being connected between the conductor of the cable and ground for reactive shunt compensation.

2. An installation according to claim 1, **characterized** in that it comprises a plurality of said inductors (13) distributed along the line at considerable distances from each other.

3. An installation according to claim 2, **characterized** in that said inductors (13) are essentially uniformly distributed along the line.

4. An installation according to any of the preceding claims, **characterized** in that the cable (4) is of an extruded type, that is, with an insulating layer (6) of cross-linked polyethylene.

5. An installation according to any of the preceding claims, **characterized** in that the cable (4) is of the type that also comprises an inner layer (8), arranged nearest the conductor (5), with an electrical conductivity that is lower than the electrical conductivity of the conductor but sufficient to cause this inner layer to act in a potential-equalizing manner to equalize the electric field externally of this inner layer, and that the screen layer (7) has an electrical conductivity that is higher than that of the insulating

layer (6) to render the screen layer capable of functioning in a potential-equalizing manner, through connection to ground, and to essentially enclose the electric field that arises inside the screen layer as a result of the electric conductor.

6. An installation according to any of the preceding claims, **characterized** in that the inductor (13) is completely or partially buried in the ground.

7. An installation according to any of the preceding claims, **characterized** in that the cable, at the inductor, is divided into a cable part (4',4") on both sides of the point of connection to the cable, that the installation comprises means for connection of the inductor to the cable comprising three connection devices (10, 11, 14) for connection of an end of the electric conductor (5) of each cable part to a respective such device and an end of the inductor to the third device, and a member (25) for electrically interconnecting the three devices.

8. An installation according to any of the preceding claims, **characterized** in that the inductor (13) comprises a winding arranged in a casing (12) located at ground potential, said winding being connected by one end to the electric conductor (5) of the cable and by its other end (15) to the casing.

9. An installation according to any of the preceding claims, **characterized** in that the inductor (13) is provided with an auxiliary winding (22) for delivering auxiliary energy to a consumer, such as equipment for operation of parts of the installation and communication between such parts and/or between the installation and external equipment.

10. An installation according to any of the preceding claims, **characterized** in that it comprises an optical fibre (16), laid along the cable or integrated into the cable, for use of a device (17) for protection of the installation

and/or commercial communication within the installation and/or with the surroundings.

11. An installation according to any of the preceding claims, **characterized** in that the ac voltage line exhibits three phases with a said cable for each phase.

12. An installation according to claim 11, **characterized** in that the inductor is of three-phase type with the cables of the respective phase connected to a separate inductor winding (18-20) in a respective phase leg of a common core (21).

13. An installation according to any of the preceding claims, **characterized** in that the cable (4) is designed to have a system voltage of between 50 kV and 500 kV, preferably between 30 kV and 300 kV, between the conductor (5) and the screen layer (7).

14. An installation according to any of the preceding claims, **characterized** in that the installation is designed for a maximum transmissible power, via the ac voltage line (3), of 50 MW-600 MW.

15. An installation according to any of the preceding claims, **characterized** in that the distance between said switchgear units (1,2) exceeds 25 km.

16. An installation according to any of the preceding claims, **characterized** in that the distance between a said inductor (13), located nearest a switchgear unit, and the switchgear unit (1,2) and between adjacent said inductors (13), respectively, is 5-40 km, preferably 10-25 km.

17. An installation according to any of the preceding claims, **characterized** in that said inductor (13) is dimensioned for a reactive power of 5-30 MVAr.

18. An installation according to any of the preceding claims, **characterized** in that the dimensioning of a said

inductor (13) and the distance between adjacent inductors and between a said inductor and a switchgear unit (1, 2), respectively, are adapted to the magnitude of the voltage the cable is intended to carry and the shunt capacitance-/unit of length of the cable to essentially eliminate capacitive currents in the cable.